



September 15, 2016

Tom Moe USS Corporation P.O. Box 417 8771 Park Ridge Dr Mountain Iron, MN 55768

RE: Project: NPDES-TB Wk1
Pace Project No.: 1274188

Dear Tom Moe:

Enclosed are the analytical results for sample(s) received by the laboratory on September 07, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Melisa M Woods

Massia Wirds

melisa.woods@pacelabs.com

Project Manager

Enclosures

cc: Cory Hertling Terri Sabetti, NTS



315 Chestnut Street Virginia, MN 55792 (218) 742-1042



CERTIFICATIONS

Project: NPDES-TB Wk1
Pace Project No.: 1274188

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792

Alaska Certification #MN01084

Arizona Department of Health Certification #AZ0785

Minnesota Dept of Health Certification #: 027-137-445

North Dakota Certification: # R-203

Wisconsin DNR Certification # : 998027470

WA Department of Ecology Lab ID# C1007

Nevada DNR #MN010842015-1

Oklahoma Department of Environmental Quality

Duluth Minnesota Cerification ID's

4730 Oneota St., Duluth, MN 55807

Minnesota Dept of Health Certification #: 027-137-152

Wisconsin DNR Certification #: 999446800

North Dakota Certification #: R-105





SAMPLE SUMMARY

Project: NPDES-TB Wk1

Pace Project No.: 1274188

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1274188001	SD 001 (Seep 020)	Water	09/07/16 11:20	09/07/16 14:05



Virginia, MN 55792 (218) 742-1042

SAMPLE ANALYTE COUNT

Project: NPDES-TB Wk1

Pace Project No.: 1274188

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
1274188001	SD 001 (Seep 020)	EPA 1664A TPH (1999)	DES	1	PASI-DUL
		USGS I-3765	BEM	1	PASI-V
		EPA 300.0	DMB	1	PASI-V



Date: 09/15/2016 09:40 AM

ANALYTICAL RESULTS

Project: NPDES-TB Wk1
Pace Project No.: 1274188

Sample: SD 001 (Seep 020)	Lab ID:	1274188001	Collecte	d: 09/07/16	11:20	Received: 09	/07/16 14:05 Ma	trix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical	Method: EPA	1664A TPH	(1999)					
Total Petroleum Hydrocarbons	ND	mg/L	3.1	1.1	1	09/12/16 13:27			
USGS I-3765 TSS	Analytical	Method: USG	S I-3765						
Total Suspended Solids	1.6	mg/L	1.0	1.0	1		09/13/16 13:28		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0						
Sulfate	942	mg/L	20.0	10.0	10		09/13/16 22:24	14808-79-8	



QUALITY CONTROL DATA

Project: NPDES-TB Wk1

Pace Project No.: 1274188

Associated Lab Samples:

Date: 09/15/2016 09:40 AM

QC Batch: 93809

QC Batch Method:

1274188001

EPA 1664A TPH (1999)

Analysis Method: Analysis Description: EPA 1664A TPH (1999)

1664 SGT-HEM, TPH

METHOD BLANK: 369197 Matrix: Water

Associated Lab Samples: 1274188001

> Blank Reporting

MDL Parameter Units Result Limit Qualifiers Analyzed Total Petroleum Hydrocarbons ND 3.0 1.0 09/12/16 10:21 mg/L

LABORATORY CONTROL SAMPLE: 369198

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Total Petroleum Hydrocarbons mg/L 20 17.9 90 64-132

MATRIX SPIKE SAMPLE: 369199

1274082001 MS Spike MS % Rec Parameter Units Result Conc. Result % Rec Limits Qualifiers <1.1 64-132 Total Petroleum Hydrocarbons 20.4 17.4 83 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: NPDES-TB Wk1

Pace Project No.:

1274188

QC Batch:

93989

QC Batch Method: USGS I-3765

Associated Lab Samples: 1274188001 Analysis Method:

USGS I-3765

Analysis Description:

USGS I-3765 Total Suspended Solids

1.0

Matrix: Water

Associated Lab Samples:

METHOD BLANK: 369905

1274188001

Blank

Reporting

216

1.0

Parameter Total Suspended Solids mg/L

Units

Limit Result

ND

MDL

Analyzed 09/13/16 13:28 Qualifiers

LABORATORY CONTROL SAMPLE:

Parameter

Parameter

369906

Units

mg/L

mg/L

Spike Conc.

LCS Result

LCS % Rec % Rec Limits

Qualifiers

SAMPLE DUPLICATE: 369907

Total Suspended Solids

Parameter Units Total Suspended Solids mg/L 1274317001 Result 118

26.7

239

Dup Result

112

RPD

5

13

90

Max **RPD**

10

80-120

Qualifiers

SAMPLE DUPLICATE:

Total Suspended Solids

Date: 09/15/2016 09:40 AM

369908

1274398002 Units Result

Dup Result

RPD 23.3

Max RPD

Qualifiers 10 D6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: NPDES-TB Wk1

Pace Project No.: 1274188

Date: 09/15/2016 09:40 AM

QC Batch: 93974 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Associated Lab Samples: 1274188001

METHOD BLANK: 369855 Matrix: Water

Associated Lab Samples: 1274188001

ParameterUnitsBlank Reporting ResultReporting LimitMDLAnalyzedQualifiersSulfatemg/LND2.01.009/13/16 13:32

LABORATORY CONTROL SAMPLE: 369856

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Sulfate mg/L 50 50.8 102 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 369857 369858

MS MSD 1274628001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Sulfate 50 90-110 20 mg/L 50 92.0 92.6 101 102

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 369862 369863

MS MSD 1274462001 MS MSD MS MSD Spike Spike % Rec Max % Rec Limits RPD Parameter Units Result Conc. Conc. Result Result % Rec RPD Qual Sulfate ND 50 50 48.2 48.2 95 95 90-110 0 20 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: NPDES-TB Wk1
Pace Project No.: 1274188

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-DUL Pace Analytical Services - Duluth
PASI-V Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

Date: 09/15/2016 09:40 AM

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NPDES-TB Wk1

Pace Project No.: 1274188

Date: 09/15/2016 09:40 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1274188001	SD 001 (Seep 020)	EPA 1664A TPH (1999)	93809		
1274188001	SD 001 (Seep 020)	USGS I-3765	93989		
1274188001	SD 001 (Seep 020)	EPA 300.0	93974		

					12	1	10	e L	8)	7	5	o.	65	2	-	ITEM#			Reques	Email	Mt. Iron,	Address:	Require	Section A	
															SD 001 (Seep 020)	San Or CO	·		Requested Due Date:		Ž		Required Client Information:	Þ	Sace A.
				3 6				_							eep 020	ne Char				+	-	P.O. Box 417	rmatic		ace Analytical
				PHILONAT COMMENIA											9	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique			GA	rav.		allon	on:		
	:															Water Waste Vider Waste Vider Product Soll/Solid Oil Wilpe Air Other Tissue	MATRIX Drinking W								
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SAMPLER, NAME AND SIGNATURE PRINT Name of SAMPLER: SIGNATURE of SAMPLER:				NO.											11. 2018/10 at 11	DATE	COLLECTED								CHAIN-OF-CUSTODY / Analy* The Chain-of-Custody is a LEGAL DOCUMEN
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(Y/N) Samples				Ġ																Wildian Albanda					
Intact (Y/N)				î.																MONEY TOUR					

Pace Analytical

Document Name:

Sample Condition Upon Receipt Form

Document No.: F-VM-C-001-Rev.09

Document Revised: 23Feb2015

Page 1 of 1

Issuing Authority:

Pace Virginia, Minnesota Quality Office

Sample Condition Client Name: MO: #112744 818 Project #: Upon Receipt USPS Pace Other: Commercial Tracking Number: Optional: Proj. Due Date: Proj. Name: **∑**(vìo Seals Intact? Yes □No Custody Seal on Cooler/Box Present? Yes Temp Blank? Yes Other: Packing Material: Bubble Wrap Bubble Bags None □No Thermometer Used: 🔀 140792808 Blue None Samples on ice, cooling process has begun Type of Ice: Wet Cooler Temp Read °C: 24 Cooler Temp Corrected °C: 2.7 Biological Tissue Frozen? Yes No NA

Temp should be above freezing to 6°C Correction Factor: 10.3 Date and Initials of Person Examining Contents: 157 600 9-7-16 **✓**Yes □N/A Chain of Custody Present? □No √ÎŶes □No 2. Chain of Custody Filled Out? □N/A □No Chain of Custody Relinquished? □N/A Yes No Sampler Name and Signature on COC? ∏N/A No □N/A Samples Arrived within Hold Time? □N/A 6. Short Hold Time Analysis (<72 hr)? Yes Yes No □N/A Rush Turn Around Time Requested? Yes Sufficient Volume? No N/A Correct Containers Used? **X**Yes □No □N/A -Pace Containers Used? Yes □No □N/A ΠNο □N/A Containers Intact? ∕**Z**Yes 10. No. Yes □N/A Filtered Volume Received for Dissolved Tests? 11. Note if sediment is visible in the dissolved containers. Yes □No Sample Labels Match COC? □N/A -Includes Date/Time/ID/Analysis Matrix: See pH log for results and additional preservation All containers needing acid/base preservation will be Yes □N/A documentation checked and documented in the pH logbook. Yes '**X**ON/A □No Headspace in Methyl Mercury Container Yes No 14. Heads pace in VOA Vials (>6mm)? Trip Blank Present? 15. Yes □No Trip Blank Custody Seals Present? Yes □No Pace Trip Blank Lot # (if purchased):_ CLIENT: NOTIFICATION/RESOLUTION Field Data Required? Yes No Person Contacted: Comments/Resolution: FECAL WAIVER ON FILE Y TEMPERATURE WAIVER ON FILE Y N

Intra-Regional Chain of Custody



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LAB USE ONLY			EPA		Matrix HCL	Lab (D	Collect Date/Time	Sample Type		n Sample ID	Item
			ners	Preserved Contai					ds	Report to: Melisa M Woods	Me
			PH (1999)							I)
						Phone (218) 727-6380	Phone (218) 727-6		5792 42-1042	Virginia, MN 55792 Phone (218) 742-1042	P Sign
						Pace Analytical Duluth 4730 Oneota Street	Pace Analytical Dulu 4730 Oneota Street		l Virginia Street	Pace Analytical Virginia 315 Chestnut Street	315 315
	Analysis	Requested Analysis			1.1	b: John of the	Send To Lab:			Received at:	Rec
/2016	Due Date: 9/21/2016	Owner Received Date: 9/7/2016	ner Receive	Ow		TB Wk1	Workorder Name: NPDES-TB Wk1	Workorder N		Workorder: 1274188	×
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^{***}In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Thursday, September 08, 2016 1:47:52 PM



Document Name: Sample Condition Upon Receipt Form

Document No.: F-DUL-C-001-Rev.01

Document Revised: 22Jan2016 Page 1 of 1

Issuing Authority:

Pace Virginia, Minnesota Quality Office

Sample Condition Client Name:			Project #	;
Upon Receipt R CO C From Courier:	USPS Other:		lient	
Tracking Number:				
Custody Seal on Cooler/Box Present?	□No	Seals In	ntact? 도	Yes No Optional: Proj. Due Date: Proj. Name:
Packing Material: Bubble Wrap Bubble	Bags 🔲 No	one [Other:	Temp Blank? ✓ Yes No
hermometer Used: 🔊 B00051	Type of I	ce: 🔽	Wet	Blue None Samples on ice, cooling process has begun
Cooler Temp Read °C: 2.0 Cooler Temp emp should be above freezing to 6°C Correction F	Corrected °C	<u></u>	Date and	Biological Tissue Frozen? Yes No NA Initials of Person Examining Contents: 918/14 Kp Comments:
Chain of Custody Present?	Yes	□No	□n/a	1.
Chain of Custody Filled Out?	Yes	□No	□N/A	2.
Chain of Custody Relinquished?	Yes	□No	□n/a	3.
Sampler Name and Signature on COC?	∐Yes	□No	⊿ M∕a	4.
Samples Arrived within Hold Time?	Yes	□No	□N/A	5.
Short Hold Time Analysis (<72 hr)?	Yes	No	□N/A	6.
Rush Turn Around Time Requested?	∐Yes		□n/a	7.
Sufficient Volume?	Yes	□No	□N/A	8.
Correct Containers Used?	Yes	□No	□N/A	9.
-Pace Containers Used?	∑ ∡∕es	□No	∐N/A	
Containers Intact?	Yes	□No	□N/A	10.
Filtered Volume Received for Dissolved Tests?	Yes	∏No	N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	y⊒¥es	No	N/A	12.
-Includes Date/Time/ID/Analysis Matrix: w	Τ			
All containers needing acid/base preservation will be checked and documented in the pH logbook.		□No	N/A	See pH log for results and additional preservation documentation
Headspace in Methyl Mercury Container	□Yes	□No	∭N/A	13.
Headspace in VOA Vials (>6mm)?	Yes	□No	□N/A	14.
Trip Blank Present?	□Ýes	□No	□N/A	15.
Trip Blank Custody Seals Present?	Yes	□No	D N/A	
Pace Trip Blank Lot # (if purchased):			•	
CLIENT NOTIFICATION/RESOLUTION			•	Field Data Required? Yes No
Person Contacted:				Date/Time:
Comments/Resolution:				
·				
FECAL WAIVER ON FILE Y N		TEM	IPERATU	RE WAIVER ON FILE Y N
Project Manager Review:	to) /	UF	Date: 9-9-16

Project Manager Review:

Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)